



Monitoring and Management Activities – Vicksburg National Military Park



Although established as a historic site, almost two-thirds of Vicksburg National Military Park's (VICK) present-day landscape has reverted to a more natural state, and comprises a unique loess soil, ridge, and ravine habitat. The land area of the park is approximately 1800 acres (730 hectares). All park land is managed, with about 600 acres of the park's landscape maintained for visitor use (mowed every 2 weeks, vegetation trimmed, parking lots/roads kept clear of debris, etc.), and therefore exposed to human impacts. The park is day-use only as there are no campgrounds located within the park.

The remainder is forested or 'backfield' (mowed only 1-2 times per year) areas which are managed for the cultural, historical, and natural landscape resources, including preservation of historic landscape features, monument/tablet conservation, exotic plant management, etc. There are several monitoring projects in the park that are being, or have been, recently conducted, with most of these efforts (listed below) in areas not readily accessible by the public. Some of the surveys, however, are conducted along the main tour road (16 miles) and/or close to areas that are used by staff and visitors.

Amphibians and Reptiles



Working with the National Park Service (NPS) Gulf Coast Network Inventory & Monitoring group (GULN), VICK has established a monitoring program for amphibians and reptiles using cover board arrays and PVC-pipe tree samplers in three areas of the park. The effort is now entering its third year, and with the finalization of monitoring protocols, a GULN team is now in place and performing the monitoring on an established schedule.

A frog/toad tracking route has also been established within the park's boundaries, with the assistance of the Mississippi Department of Wildlife, Fisheries, and Parks. This monitoring is done through tracking frog/toad calls during three sampling periods extending from January through July. Data is then entered into the U.S. Geological Services (USGS) North American Amphibian Monitoring Program database.

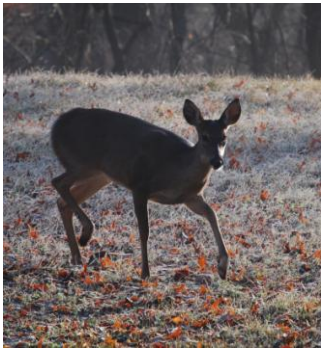
Birds



Through an agreement with USGS, the GULN is currently monitoring breeding bird use of VICK with the data used to establish protocols for breeding bird monitoring throughout the GULN's eight network parks. This monitoring is currently ongoing, and includes vegetation data collection,

which has, and continues to, supplement data used to develop a vegetation map for VICK. Results from this project will also be used as the basis to propose further study of the habitat utilization of breeding birds in VICK.

Large Mammals



A large mammal monitoring project indicated that VICK's white-tailed deer (*Odocoileus virginianus*) herd is not adversely affecting the vegetation of the park (no browse lines observed) at this time. Implementation of the preferred alternative determined by the park's recently completed Cultural Landscape Report and Environmental Assessment (clearing of 80-90 acres of forested area) for landscape

rehabilitation is expected to result in an increase in deer density, but will also increase the park's carrying capacity due to the fact that more edge habitat will be made available, which is the preferred foraging habitat for this species. Results from this project will also be used as the basis to propose further study of habitat utilization by white-tailed deer.

Water



Water quality is measured at three sites at VICK on a quarterly basis. Collected results are provided to the GULN hydrologist who analyzes the raw data and provides the information for park and network use.



Sound



VICK recently completed an acoustical monitoring project with the assistance of the NPS Natural Sounds Program (located in Ft. Collins, Colorado), to provide sound/noise monitoring for approximately one month during the summer of 2010. The goal was to determine a natural ambience soundscape (conducted in a remote area of the park) for comparisons

with high-use areas of the park (near tour road/city streets and highways/high visitor impact areas). This monitoring and analysis has provided information regarding sound intrusion and impact on the visitor experience. This will also aid in future projects when vegetation is removed and the landscape potentially exposed to more noise intrusion.

Invasive and Nuisance Species Management



VICK works with the NPS Exotic Plant Management Team (EPMT) to treat several areas within the park for kudzu. The treatments are done on an annual basis, with current acreage treated at approximately 10-12 acres, down considerably from the 25-30 from only a few years ago.

Additionally, the park regularly works to control areas of chinaberry, Johnson grass, Chinese parasol trees, and other invasive plant species, through mechanical and herbicide treatments, and prescribed burns.

VICK has also recently been successful in removing a semi-feral pig population that had established itself within the park boundaries. With the assistance of the USDA APHIS Wildlife Services branch, the pigs were trapped and removed from the park. The park is continuing this partnership with USDA to monitor other nuisance species populations.

